

WHAT IS CLAIMED IS

1. A battery electrode made of a carbon-carbon composite material in which vapor-phase growth carbon fibers are uniformly dispersed in a carbon matrix.

5 2. A battery electrode according to Claim 1, wherein said vapor-phase growth carbon fibers are subjected to graphitization.

10 3. A battery electrode according to Claim 1, wherein a precursor of said carbon matrix is a synthetic resin.

15 4. A battery electrode according to Claim 1, wherein a formulation amount of said vapor-phase growth carbon fibers is 30-90 weight %.

20 5. A battery electrode according to Claim 1, wherein a formulation amount of said vapor-phase growth carbon fibers is 50-80 weight %.

 6. A battery electrode according to Claim 1, wherein said carbon-carbon composite material is subjected to graphitization.

20 7. A method for producing the battery electrode as set forth in Claim 1, comprising:

intermixing a synthetic resin with vapor-phase growth carbon fibers to make said vapor-phase growth carbon fibers uniformly dispersed in said synthetic resin to obtain a mixture;

5 molding said mixture into a predetermined shape to obtain a molded product; and

 heating said molded product at high temperature to convert it into a carbon-carbon composite.

10 8. A method for producing the battery according to Claim 7, further comprising a step of graphitizing said vapor-phase growth carbon fibers.

 9. A method for producing the battery according to Claim 7, wherein said heating step at high temperature includes carbonization and graphitization.

15 10. A battery comprising:
 a positive electrode formed of the electrode as set forth in Claim 1;
 a negative electrode; and
 an electrolyte into which said positive electrode
20 and said negative electrode are immersed.

 11. A battery according to Claim 10, wherein said negative electrode is made of a carbon-carbon composite

material in which vapor-phase growth carbon fibers are uniformly dispersed in a carbon matrix.

12. A battery according to Claim 10, wherein said negative electrode is a metal lithium plate.

5 13. A battery according to Claim 10, wherein said battery is a lithium secondary battery.

14. A battery according to Claim 13, wherein said electrolyte contains lithium perchlorate.

10 15. A battery according to Claim 10, wherein said vapor-phase growth carbon fibers are subjected to graphitization.

16. A battery according to Claim 10, wherein a precursor of said carbon matrix is a synthetic resin.

15 17. A battery according to Claim 10, wherein a formulation amount of said vapor-phase growth carbon fibers is 30-90 weight %.

18. A battery according to Claim 10, wherein a formulation amount of said vapor-phase growth carbon fibers is 50-80 weight %.

19. A battery according to Claim 10, wherein said carbon-carbon composite material is subjected to graphitization.